

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OF PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. An isolated nucleic acid comprising a nucleotide sequence selected from the group consisting of the nucleotide sequence defined by SEQ ID NO:5, or a fragment, derivative or analog thereof, SEQ ID NO:6, or a fragment, derivative or analog thereof, SEQ ID NO:7, or a fragment, derivative or analog thereof, SEQ ID NO:8 or a fragment, derivative or analog thereof, SEQ ID NO:9, or a fragment, derivative or analog thereof, SEQ ID NO:22 or a fragment, derivative or analog thereof, SEQ ID NO:23, or a fragment, derivative or analog thereof, SEQ ID NO:24, or a fragment, derivative or analog thereof, SEQ ID NO:26, or a fragment, derivative or analog thereof, and a combination thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

2. The isolated nucleic acid of claim 1 comprising the nucleotide sequence defined by SEQ ID NO:6, or a fragment, derivative or analog thereof.

3. The isolated nucleic acid of claim 1 comprising the nucleotide sequence defined by SEQ ID NO:7, or a fragment, derivative or analog thereof.

4. An isolated nucleic acid, wherein said isolated nucleic acid exhibits translational regulatory activity and hybridizes to a nucleotide sequence selected from the group consisting of the nucleotide sequence defined by SEQ ID NO:5, or a fragment, derivative or analog thereof, SEQ ID NO:6, or a fragment, derivative or analog thereof, SEQ ID NO:7, or a fragment, derivative or analog thereof, SEQ ID NO:8 or a fragment, derivative or analog thereof, SEQ ID NO:9, or a fragment, derivative or analog thereof, SEQ ID NO:22 or a fragment, derivative or analog thereof, SEQ ID NO:23, or a fragment, derivative or analog thereof, SEQ ID NO:24, or a fragment, derivative or analog thereof, SEQ ID NO:26, or a fragment, derivative or analog thereof, and a combination thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity, said hybridization conditions selected from the group consisting of:

- i) 1M Na⁺, at about 5°C below T_m, followed by washing at the same temperature as that of hybridization in 6 X SSC; and

ii) 5 X SSPE, 0.1% SDS at about 5°C below T_m , followed by washing at the same temperature as that of hybridization in 6 X SSC;

wherein, said T_m is defined as: $T_m = 81.5 - 16.6(\log[Na^+]) + 0.41(\%G+C) - (600/N)$; and, N is the length of said nucleotide sequence.

5. The isolated nucleic acid of claim 1 comprising nucleotides 1-16 of SEQ ID NO:6, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

6. The isolated nucleic acid of claim 1 comprising nucleotides 10-24 of SEQ ID NO:6, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

7. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:15, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

8. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:16, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

9. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:18, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

10. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:19, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

11. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:20, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

12. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:22, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.
13. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:23, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.
14. The isolated nucleic acid of claim 1, comprises the nucleotide sequence of SEQ ID NO:24, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.
15. The isolated nucleic acid of claim 1, comprising the nucleotide sequence of SEQ ID NO:6.
16. The isolated nucleic acid of claim 1, comprising nucleotides 1-16 of the nucleotide sequence of SEQ ID NO:6.
17. The isolated nucleic acid of claim 1, comprising nucleotides 10-24 of the nucleotide sequence of SEQ ID NO:6.
18. A construct comprising, at least one isolated nucleic acid as defined by claim 1 in operative association with a gene of interest, and one or more regulatory elements required for the expression of the gene of interest within a host organism.
19. A construct comprising, at least one isolated nucleic acid as defined in claim 2 in operative association with a gene of interest, and one or more regulatory elements required for the expression of the gene of interest within a host organism.
20. A transgenic host comprising the isolated nucleic acid of claim 1.
21. A transgenic host comprising the isolated nucleic acid of claim 2.

22. The transgenic host of claim 20, wherein said transgenic host is selected from the group consisting of a plant, tree, animal, insect, yeast, fungi and bacteria.
23. The transgenic host of claim 22, wherein said transgenic host is a plant.
24. A transgenic seed obtained from the plant of claim 23.
25. A method of mediating the translational activity of a transcript comprising, transforming a host with the construct of claim 18.
26. A method of mediating the translational activity of a transcript comprising, transforming a host with the construct of claim 19, and growing said host.
27. A method of increasing the amount of protein produced in an organism comprising, transforming said organism with the construct of claim 18, growing said organism, and obtaining said protein therefrom.
28. The construct of claim 18, wherein said one or more regulatory elements comprises a regulatory element selected from the group consisting of an inducible promoter, developmentally regulated promoter, tissue specific promoter, constitutive promoter, and enhancer element.
29. The isolated nucleic acid of claim 1 comprising the nucleotide sequence defined by SEQ ID NO:5, or a fragment, derivative or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.
30. The isolated nucleic acid of claim 1 comprising the nucleotide sequence defined by SEQ ID NO:8, or a fragment, derivative or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.

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31. The isolated nucleic acid of claim 1 comprising the nucleotide sequence defined by SEQ ID NO: 9, or a fragment, derivative or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.
32. The isolated nucleic acid of claim 1, comprising the nucleotide sequence of SEQ ID NO:26, or a fragment, or analog thereof, wherein said fragment, derivative or analog thereof exhibits translational regulatory activity.
33. A construct comprising, at least one isolated nucleic acid as defined by claim 29 in operative association with a gene of interest, and one or more regulatory elements required for the expression of the gene of interest within a host organism.
34. A construct comprising, at least one isolated nucleic acid as defined by claim 30 in operative association with a gene of interest, and one or more regulatory elements required for the expression of the gene of interest within a host organism.
35. A construct comprising, at least one isolated nucleic acid as defined by claim 31 in operative association with a gene of interest, and one or more regulatory elements required for the expression of the gene of interest within a host organism.
36. A construct comprising, at least one isolated nucleic acid as defined by claim 12 in operative association with a gene of interest, and one or more regulatory elements required for the expression of the gene of interest within a host organism.
37. The transgenic host of claim 22, wherein said transgenic host is a yeast.
38. The transgenic host of claim 22, wherein said transgenic host is a bacteria.
39. The transgenic host of claim 22, wherein said transgenic host is a tree, and said tree is a conifer.
40. The transgenic host of claim 23, wherein said transgenic host is a monocot plant.

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